Technics

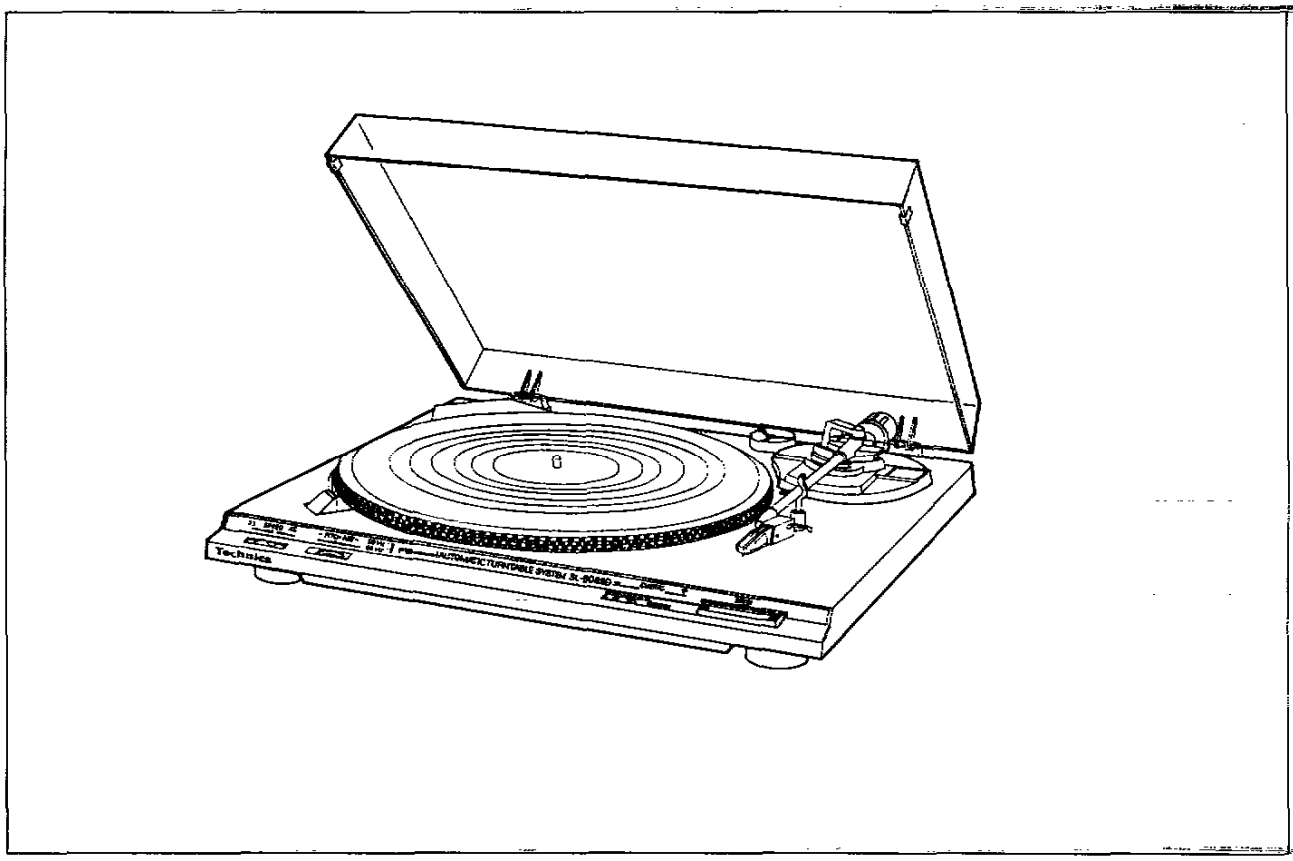
FG SERVO

Automatic Turntable System

SL-BD22D

T4P is the standard mark for the "P-mount" plug-in connector system. Products carrying this mark are interchangeable and compatible with each other.

OPERATING INSTRUCTIONS



Note:
The "EB" indication shown on the packing case indicates United Kingdom.

Before operating this unit, please read these instructions completely.

EB

RQT3089-B

Technics

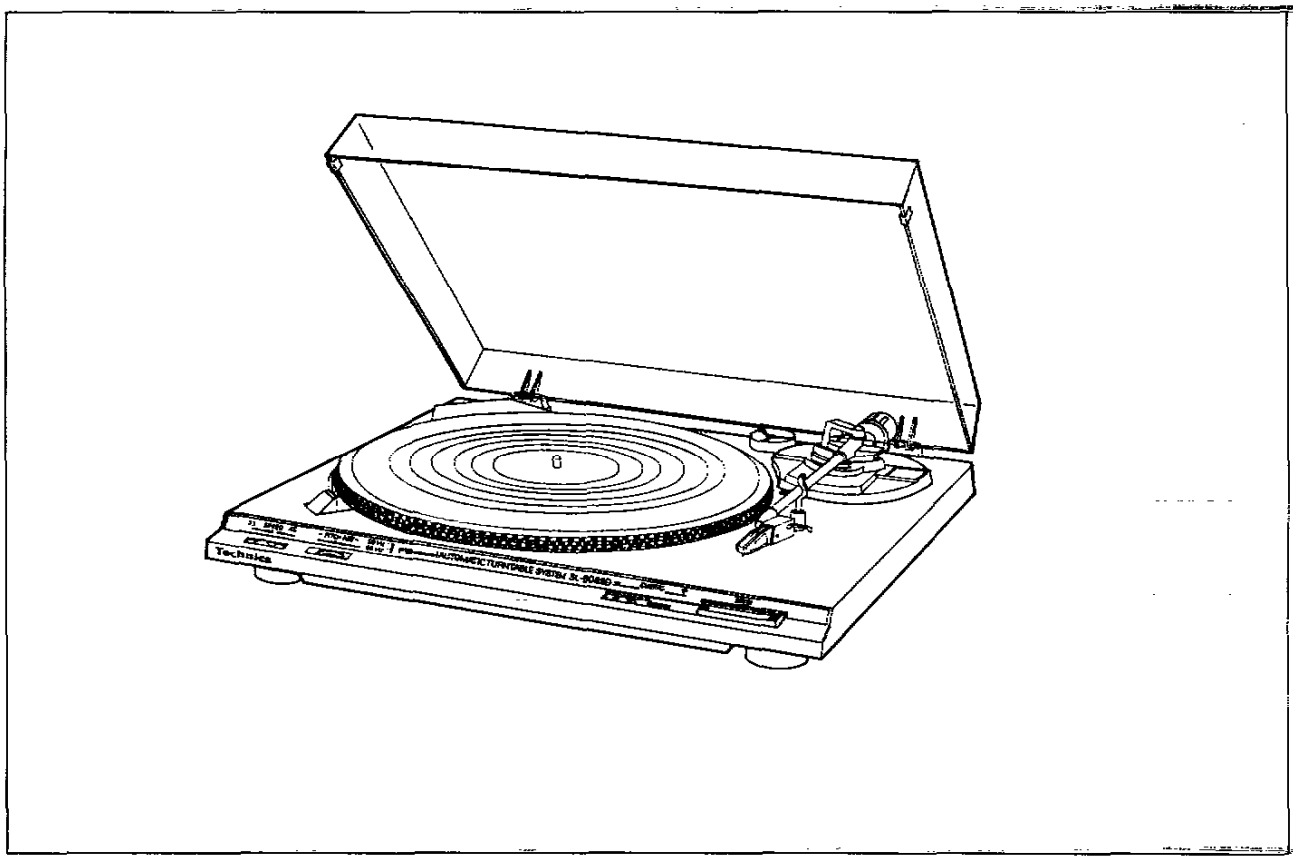
FG SERVO

Automatic Turntable System

SL-BD22D

T4P is the standard mark for the "P-mount" plug-in connector system. Products carrying this mark are interchangeable and compatible with each other.

OPERATING INSTRUCTIONS



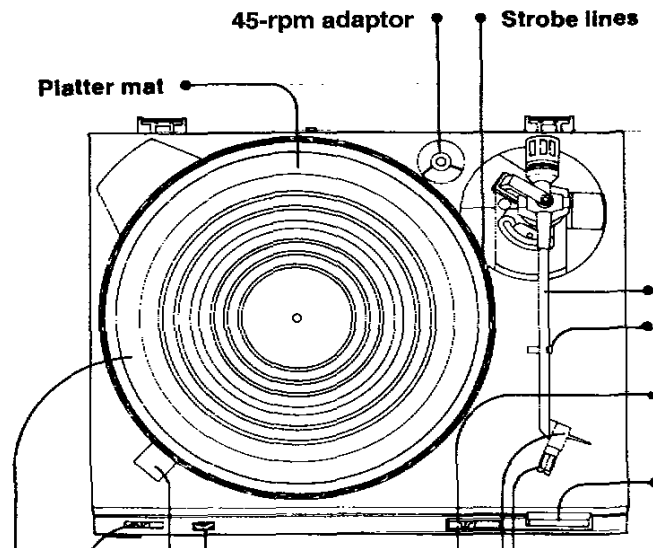
Note:
The "EB" indication shown on the packing case indicates United Kingdom.

Before operating this unit, please read these instructions completely.

EB

RQT3089-B

Operation



This unit's strobe illuminator operates at the AC line frequency which generally has a 0.2% fluctuation.
This fluctuation, when present, may make the strobe pattern appear to change. However, actual platter speed does not change, because the DC motor is not affected by AC power line frequency.

Notes:

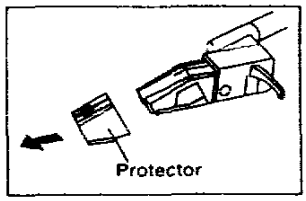
- Do not try to clean the dust cover while a disc is playing, because static electricity might cause the tonearm to rise.
- The unit is in the standby condition when the AC power supply cord is connected.
  The primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

1 **Place a disc on the platter mat.**

2 **Speed selector**
Set to disc's speed.

3 **Cueing control**
Set to " ▽ ".

4 **Remove the stylus protector.**
(The tape on side of cartridge prevents the stylus assembly from shaking loose during shipment.)



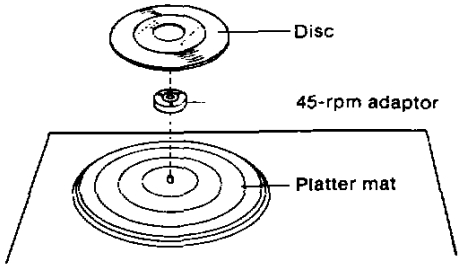
5 **Move to the desired position.**
(The strobe-illuminator/pilot lamp will light and the platter will start turning.)

Cartridge

P is the standard mark for the "P-mount" plug-in connector system. Products carrying this mark are interchangeable and compatible with each other.

6 **Set to " ▽ ".**
(Play will start.)

■ For a 17-cm (7") (large center hole) disc

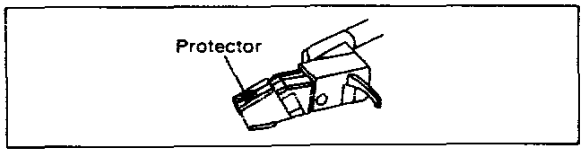


■ When play ends

1. The tonearm will automatically return to the arm rest (the automatic return feature).
2. Rotation will stop.

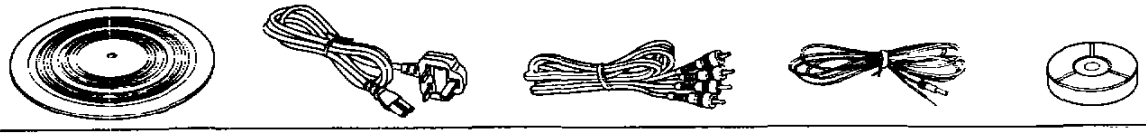
After use

Attach the stylus protector.



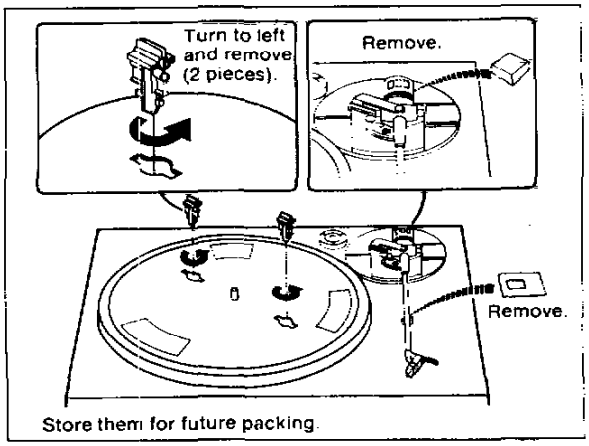
Accessories

Platter mat (1) AC power supply cord (1) Stereo connection cable (1) Ground wire (1) 45-rpm adaptor (1)

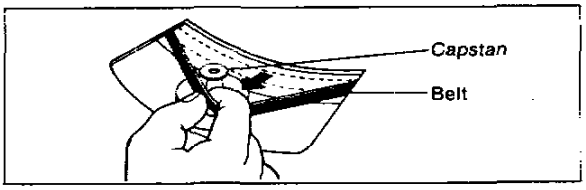


Turntable Assembly

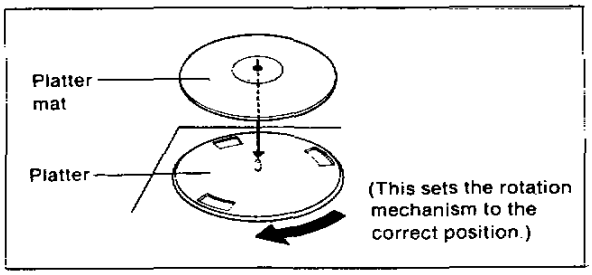
1. Remove the packing spacers.



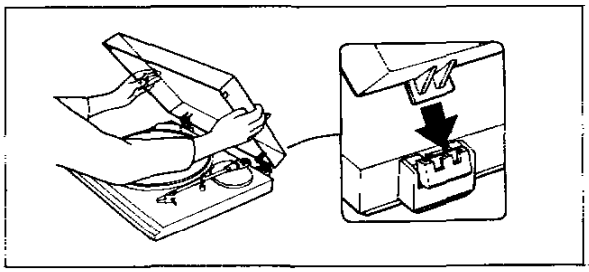
2. Attach the drive belt properly.



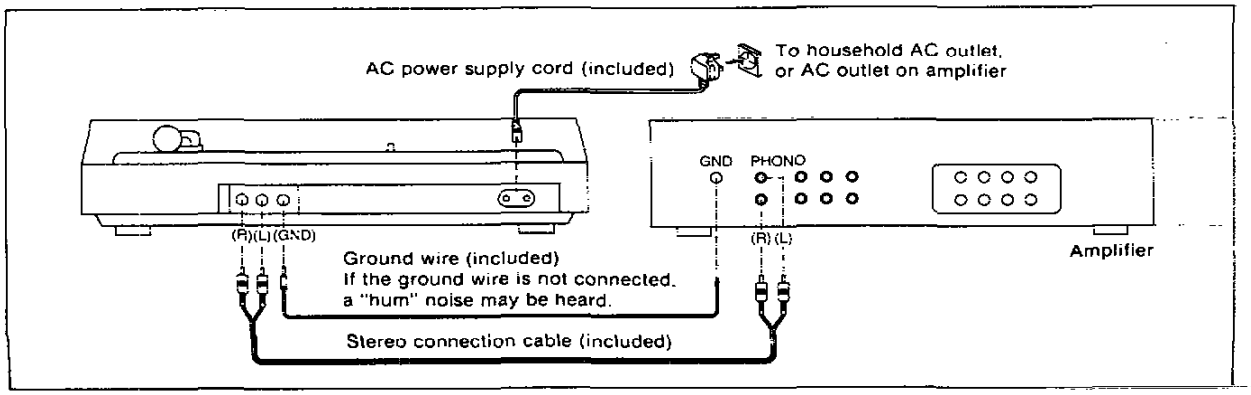
3. Place the platter mat on the platter, and turn the platter about ten times clockwise.



4. Install the dust cover.



Connections


AC power supply cord (included)
To household AC outlet, or AC outlet on amplifier
GND
PHONO
(R) (L)
Amplifier
(R)(L)(GND)
Ground wire (included)
If the ground wire is not connected, a "hum" noise may be heard.
Stereo connection cable (included)

Dear Stereo Fan

We want to thank you for selecting this product and to welcome you to the growing family of satisfied Technics product owners around the world.
We feel certain you will get maximum enjoyment from this new addition to your home.
Please read these operating instructions carefully, and be sure to keep them handy for convenient reference.

For United Kingdom

("EB" area code model only)

Important

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE:	NEUTRAL
BROWN:	LIVE

As the colours of the wires in the mains lead of this unit may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows. The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED

This apparatus was produced to BS 800

Suggestions for Safety

■ Use a standard electrical AC wall outlet

1. **Use from an AC power source of high voltage, such as for air conditioners, is very dangerous.**
   Be extremely careful not to make a connection to the electrical outlet for a large air conditioner or central-heating unit which uses high voltage, because there is the possibility of fire.
2. **A DC power source cannot be used.**
   Be sure to check the power source carefully, especially on a ship or other place where DC is used.

■ Connection and removal of the power cord plug

1. **Wet hands are dangerous.**
   A dangerous electric shock may result if the plug is touched by wet hands.
2. **Don't pull the power cord.**
   Always grasp the plug; never pull the cord itself.

■ Never attempt to repair or reconstruct this unit

A serious electric shock might occur if this unit is repaired, disassembled or reconstructed by unauthorized persons, or if the internal parts are accidently touched.

■ For families with children

Never permit children to put anything, especially metal, inside this unit. A serious electric shock or malfunction could occur if articles such as coins, needles, screwdrivers, etc. are inserted through the ventilation holes, etc. of this unit.

■ If water is spilled on the unit

Be extremely careful if water is spilled on the unit, because a fire or serious electric shock might occur. Immediately disconnect the power cord plug, and consult with your dealer.

■ Place the unit where it will be well ventilated, and away from direct sunlight

Place this unit at least 10 cm (4") away from wall surfaces, etc., and away from direct sunlight.

■ Keep the unit away from heaters, etc.

Heat can damage the external surfaces as well as internal circuits and components.

■ Avoid spray-type insecticides

Insecticides might cause cracks or "cloudiness" in the cabinet and plastic parts of this unit. The gas used in such sprays might, moreover, be ignited suddenly.

■ Never use alcohol or paint thinner

These and similar chemicals should never be used, because they may damage the finish.

■ If trouble occurs

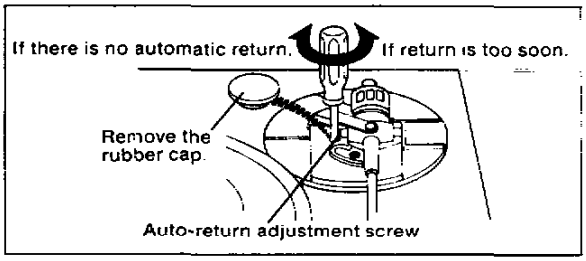
If, during operation, the sound is interrupted or indicators no longer illuminate, or if abnormal odor or smoke is detected, immediately disconnect the power cord plug, and contact your dealer or an Authorized Service Center

Adjustment

Adjustment of the automatic-return position

Make this adjustment if the tonearm doesn't return automatically to the arm rest, or if it returns before the tune ends.

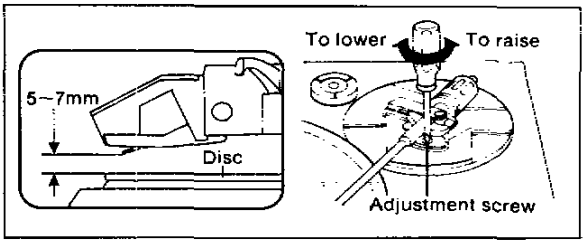
1. *Adjust to the desired automatic-return position.*
2. Check to be sure the automatic-return position is correct.



Adjustment of the stylus-to-disc clearance

This adjustment is preset at the factory for standard "P-mount" cartridges. This adjustment should not be necessary unless a nonstandard cartridge or stylus is used.

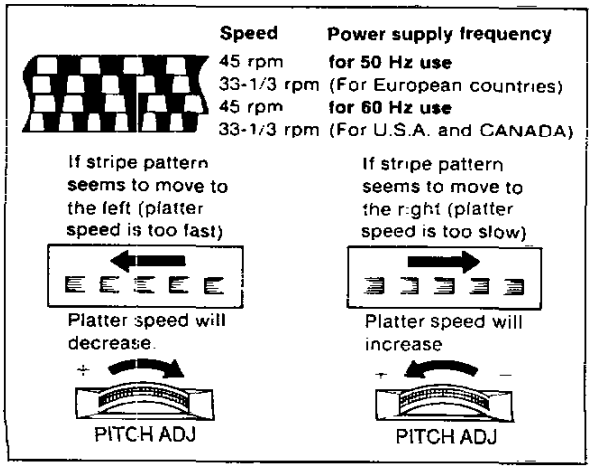
1. Set the cueing control to "▽".
2. Move the tonearm to a position above the disc.
3. Adjust the stylus tip positon.



Adjustment of the platter speed

When the platter rotates, the strobe marks form a stripe pattern according to the rotation speed and the frequency of the power supply.

The platter speed is correct when the stripe pattern of the stroboscope appears to be stationary while the platter is moving; adjust the speed if the stripes appear to be moving.

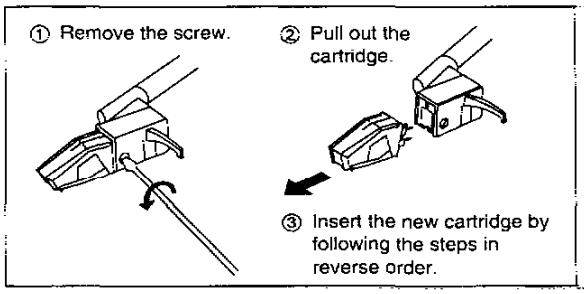

Speed
Power supply frequency
45 rpm
for 50 Hz use
33-1/3 rpm
(For European countries)
45 rpm
for 60 Hz use
33-1/3 rpm
(For U.S.A. and CANADA)
If stripe pattern seems to move to the left (platter speed is too fast)
If stripe pattern seems to move to the right (platter speed is too slow)
Platter speed will decrease.
Platter speed will increase
PITCH ADJ
PITCH ADJ

Replacement

Note: Before replacing the cartridge and stylus, disconnect the AC power supply cord.

Replacement of the cartridge

The plug-in type of cartridge is already designed to match this *unit in every respect: weight, correct stylus pressure, stylus tip position, center of gravity, etc.* This means that there's no longer any need for troublesome connection of lead wires or adjustment of the stylus pressure.



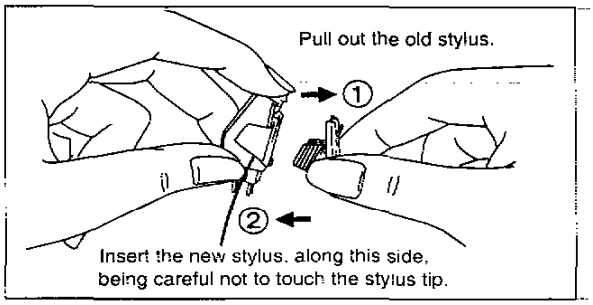
Replacement of the stylus

If noise is heard from new discs, the stylus is probably worn. Replace it with a new one.

- Stylus life..... approx. 1000 hours
- New stylus.....EPS-34CS

Preparation:

Refer to the section on "Replacement of the cartridge", remove the screw and pull out the cartridge.

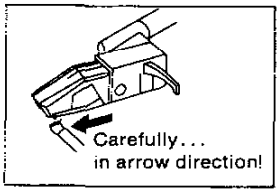


Maintenance

To clean dust from the stylus

Use a soft brush or similar material to gently remove the dust.

Thoroughly clean your discs occasionally with a high-quality disc cleaner.



Maintenance of external surfaces

To clean this unit, use a soft, dry cloth.

If the surfaces are extremely dirty, use a soft cloth, dipped into a soap-and-water solution or a weak detergent solution.

Wring the cloth well before wiping the unit.

Wipe once again with a soft, dry cloth.

Never use alcohol, paint thinner, benzine, nor a chemically treated cloth to clean this unit.

Such chemicals may damage the finish of your unit.

Troubleshooting Guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.
If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, it is recommended that you consult the store where this unit was purchased or your local Service Center (see list included) for further information and assistance.

Problem	Probable cause(s)	Suggested remedy
During disc play		
The platter doesn't turn when the tonearm is moved.	The platter's belt has slipped off.	•Re-attach the belt.
A loud and unusual sound ("howling") is heard when the volume level is increased.	The location of the turntable and speaker systems is unstable.	•If the equipment is unstable because it is located upon a soft surface, such as a carpet, place a solid material (such as concrete blocks, bricks, a hard board, etc.) beneath the speaker systems. •Try moving the turntable farther away from the speaker systems. •Try placing a cushioning material (such as felt or commercially available audio insulators) beneath the turntable.
Unusual scratching noises are heard.	Disc is old or scratched.	•Turn the treble tone control of the amplifier to reduce the treble sound.
	Dust in disc grooves.	•Use a disc cleaner to remove the dust from the disc grooves.
	Stylus needle is worn.	•If the noise is heard even when a new disc is played, probably the stylus is worn. Replace it with a new stylus.
	Dust is attached to stylus tip.	•Remove the dust by using a soft brush.

Technical Specifications

■ TURNTABLE SECTION

Type Automatic turntable
Auto-return
Auto-stop
Drive method Belt drive
Motor DC motor
Drive control method
FG method phase locked control
Turntable platter Aluminum die-cast
Diameter 312 mm
Turntable speeds 33-1/3 r/min and 45 r/min
Wow and flutter 0.045% WRMS (JIS C5521)
±0.06% Weight zero to peak (IEC 98A weighted)
Rumble −70 dB DIN-B (IEC 98A weighted)

■ TONEARM SECTION

Type Static-balanced straight tonearm
Plug-in-connector cartridge system
Effective length 230 mm
Overhang 15 mm
Tracking error angle Within 2°32' at outer groove of 30 cm record
Within 0°32' at inner groove of 30 cm record
Applicable cartridge weight 6 g

■ CARTRIDGE SECTION

Type Moving magnet stereo cartridge
Frequency response 20 Hz–20 kHz
Output voltage 2.5 mV at 1 kHz,
5 cm/s, zero to peak lateral velocity
Channel separation 22 dB at 1 kHz
Channel balance Within 2 dB at 1 kHz
Recommended load impedance 47 kΩ–100 kΩ
Compliance (dynamic)
8×10^{-6} cm/dyne at 100 Hz
Stylus pressure range 1.25±0.25 g (12.5±2.5 mN)
Weight 6 g (cartridge only)
Replacement stylus EPS-34CS

■ GENERAL

Power supply AC 230 V–240 V, 50 Hz/60 Hz
Power consumption 3 W
Dimensions (W×H×D) 430×93×375 mm
Maximum height when dust cover is open:
430×360×410 mm
Weight 3.6 kg

Note:
Specifications are subject to change without notice.
Weight and dimensions are approximate.

Matsushita Electric Industrial Co., Ltd.
Central P.O. Box 288, Osaka 530-91, Japan

Printed in Japan

RQT3089-B
F0495W0

Caution for AC mains lead (For United Kingdom)

("EB" area code model only)

The configuration of AC power supply cord has been changed.

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ⓐ or the BSI mark ♆ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

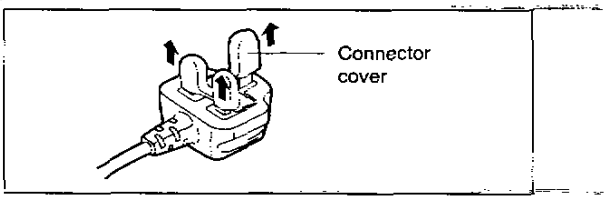
Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

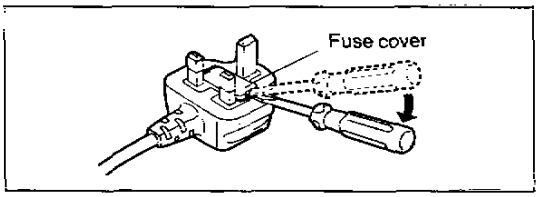
The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

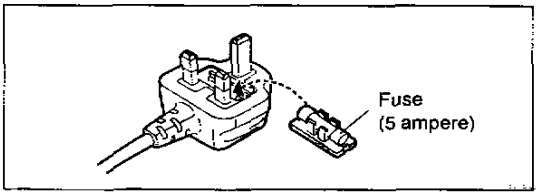
Before use
Remove the connector cover as follows.



How to replace the fuse
1. Remove the fuse cover with a screwdriver.



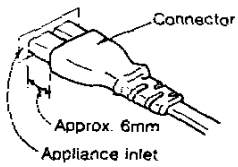
2. Replace the fuse and attach the fuse cover.



RQCS0023
F0893Y0

Note:
Insertion of Connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.



Hinweis zum Steckeranschluß:

Auch bei richtigem Anschluß des Steckers können je nach Bauart der Steckdose die Steckkontakte vorstehen (siehe folgende Abbildung) Die einwandfreie Funktion wird dadurch nicht beeinträchtigt.

REMARQUE: INSERTION DU CONNECTEUR

Même si le connecteur est bien inséré jusqu' au fond, la partie avant de la fiche peut éventuellement dépasser selon le type de prise utilisé, comme montré sur l'illustration. Quoiqu' il en soit, il n'y a aucun problème d'utilisation

RQCS0019